

**Expression of Endogenous Genes by  
Non-homologous Recombination  
of a Vector Construct With Cellular DNA**

***Abstract***

5           The field of the invention is activating gene expression or causing  
over-expression of a gene by recombination methods *in situ*. The invention  
relates to expressing an endogenous gene in a cell at levels higher than those  
normally found in the cell. Expression of the gene is activated or increased  
following integration, by non-homologous or illegitimate recombination, of a  
10       regulatory sequence that activates expression of the gene. The method allows the  
identification and expression of genes undiscoverable by current methods since  
no target sequence is necessary for integration. Thus, gene products associated  
with human disease and development are obtainable from genes that have not  
been sequenced and indeed, whose existence is unknown, as well as from  
15       well-characterized genes. The methods provide gene products from such genes  
for therapeutic and diagnostic purposes.